

A3
Inserted sequences were determined for a part of the obtained clones. As a result, 3 clones which had the target sequence were found among sequenced 27 clones.

Please amend the paragraph beginning on page 30, line 26 as follows:

A4
Inserted sequences were determined for a part of the obtained clones. As a result, 5 clones which had the target sequence were found among sequenced 15 clones.

Please amend the paragraph beginning on page 31, line 20, as follows:

A5
Inserted sequences were determined for a part of the obtained clones. As a result, 1 clone which had the target sequence was found among sequenced 19 clones.

IN THE CLAIMS

Please amend claims 1-2 as follows. All claims are shown for convenience.

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A6 B1
1. (Amended) A method for producing DNA, which comprises the following steps (1) to (4):
 - (1) dividing a target sequence which has a length of 1000 nucleotides or less and is a nucleotide sequence of DNA to be synthesized into $2N$ wherein N is a positive integer, of sections, designing partial sequences each having a length of 80 to 150 nucleotides and containing a nucleotide sequence of each section and a part of a nucleotide sequence of an adjacent section or parts of nucleotide sequences of adjacent sections, wherein the part or parts have such a length that the nucleotide sequence of the each part can specifically make base-pairing with a nucleotide sequence complementary thereto, and preparing oligomers each having each of the 1st to N th partial sequences from the 5' end of the target sequence and oligomers each having a nucleotide sequence complementary to each of the $(N+1)$ th to $(2N)$ th partial sequences from the 5' end of the target sequence,
 - (2) performing polymerase chain reaction by using an oligomer having the N th partial sequence from the 5' end of the target sequence and an oligomer having a nucleotide sequence complementary to the $(N+1)$ th partial sequence from the 5' end of the target sequence under such a condition that these oligomers should act as primers and templates for a polymerase enzyme in the polymerase chain reaction,
 - (3) sequencing synthesized DNAs and selecting DNA having a nucleotide sequence containing the N th and $(N+1)$ th partial sequences from the 5' end of the target sequence, and

(4) repeating the following steps (4a) and (4b) for J wherein J is an integer, to be from 1 to N-1:

(4a) performing polymerase chain reaction by using the selected DNA, an oligomer having the (N-J)th partial sequence from the 5' end of the target sequence and an oligomer having a nucleotide sequence complementary to the (N+1+J)th partial sequence from the 5' end of the target sequence under such a condition that the DNA and oligomers should act as primers and templates, and

(4b) sequencing synthesized DNAs and selecting DNA having a nucleotide sequence containing the (N-J)th to (N+1+J)th partial sequences.

2. (Amended) A method for producing DNA, which comprises the following steps (1) to (4):

(1) dividing a target sequence which is a nucleotide sequence of DNA to be synthesized into 2^n wherein n is a positive integer of 2 to 4, of sections, designing partial sequences each containing a nucleotide sequence of each section and a part of a nucleotide sequence of an adjacent section or parts of nucleotide sequences of adjacent sections, wherein the part or parts have such a length that the nucleotide sequence of each part can specifically make base-pairing with a nucleotide sequence complementary thereto, and preparing oligomers each having each of (odd number)th partial sequences from the 5' end of the target sequence and oligomers each having a nucleotide sequence complementary to each of (even number)th partial sequences from the 5' end of the target sequence,

(2) repeating the following step (2a) for j wherein j is an integer, to be from 1 to 2^{n-1} to produce 2^{n-1} of reaction products,

(2a) performing polymerase chain reaction by using an oligomer having the (2j-1)th partial sequence from the 5' end of the target sequence and an oligomer having a nucleotide sequence complementary to the (2j)th partial sequence from the 5' end of the target sequence under such a condition that these oligomers should act as primers and templates for a polymerase enzyme in the polymerase chain reaction,

(3) repeating the following step (3a) for i wherein i is an integer, to be from 2 to n:

(3a) repeating the following step (3ai) for k wherein k is an integer, to be from 1 to 2^{n-i} to produce 2^{n-i} of reaction products,

(3ai) mixing a reaction mixture containing DNA having the $(2^i \cdot (k-1) + 1)$ th to $(2^i \cdot (k-1/2))$ th partial sequences from the 5' end of the target sequence and a reaction mixture containing DNA having